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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,260

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Francesco Viaro

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04/17/2006

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EXAMINER

NGUYEN, JIMMY

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,260

Applicant(s)

VIARO ET AL.

Examiner

Jimmy Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14 - 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 - 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Argument

Applicant's arguments filed 1/30/06 with respect to claims 14 – 26 have been considered with the following effect;

The applicant argues that the 137' patent does not disclosed the connecting means for feeding the device or means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and energy savings to be achieved. The examiner is hereby provide new ground of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14 – 18, 20 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (US 6,836,137) in view of Viola (US 6,570,373).

As to claim 14, Hartmann disclose (fig 3) a device for the measurement of the current in a conductor, comprising:

means (61) for detecting a current,

means (69, 66) for the transmission of a signal indicative of the current,

electronic (68) means for the control, acquisition and processing of such signal indicative of the current.

However, Hartmann is silent on the connection means for the feeding the device and for the communication

wherein said device includes means for feeding the means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy saving to be achieved.

On the other hand, Viola teaches the connection (T1 – T4) means for the feeding the device (50, 52, 54) and for the communication

wherein said device includes means for feeding the means for detecting a current (from 32) in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy saving to be achieved.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartmann and use the connection device as taught by Viola for the purpose of feeding the current sensed to appropriate devices.

As to claim 15, Hartmann disclose (fig 3) a device according to claim 14, wherein means (61) for detecting a current include an insulating support and at least one magnetic field sensor (61).

As to claim 16, Hartmann disclose (fig 3) a device according to claim 15, wherein magnetic field sensor is a hall sensor (61).

As to claim 17, Hartmann disclose (fig 3) a device according to claim 14, wherein said means for the feeding (65) are controlled by said electronic (68) means for the control, acquisition and processing of said signal indicative of the current.

As to claim 18, Hartmann disclose (fig 3) a device according to claim 14, wherein means for the transmission of signal indicative of the current are linked to means of adaptation of signal.

As to claim 20, Hartmann disclose (fig 3) a device according to claim 14, wherein connecting means include feeding means and bi-directional communication.

As to claim 21, Hartmann disclose (fig 3) a device according to claim 20, wherein feeding means are fed by a current transformer (64, but wrap around by hall element 61) positioned on a conductor (40f).

As to claim 22, Hartmann disclose (fig 3) a device according to claim 21, wherein conductor (40f) is a conductor exposed to measurement.

As to claim 23, Hartmann disclose (fig 3) a device according to claim 20, wherein feeding means are linked to an external feeding source.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (US 6,836,137) in view of Viola (US 6,570,373) and further in view of Gaines (US 5,548,279).

As to claim 19, Hartmann (fig 3) and Viola (fig 1) disclosed everything except for the ADC connected to the adaptation signal. On the other hand, Gaines disclose (fig 2) a device according to claim 1, wherein means of adaptation of signal (output signal from the sensor 16) are connected to means of ADC (64).

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartman et al with the ADC as taught by Gaines for the purpose of converting the analog signal to digital signal.

3. Claims 24 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann (US 6,836,137) in view of Viola (US 6,570,373) and further in view of Vila Masot (US 4,706,073).

As to claim 24, Hartmann and Viola disclose (fig 3) everything except for an automatic low voltage circuit breaker including one or more devices being connected to a communication bus, in its turn connected to a protection device through an interface

On the other hand, Vila Masot teaches (figs 5 – 7) an automatic low voltage circuit breaker including one or more devices (sensors 40) being connected to a communication bus (alarm circuit), in its turn connected to a protection device (circuit breaker) through an interface.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartmann and Viola with the circuit breaker as taught by Vila Masot for the purpose protecting the circuit when the sensor detect the overload current.

As to claim 25, Hartmann disclose (fig 3) everything except for the operation of a circuit breaker with the sensor which is maintaining the feeding current during the first period and bringing the device in a stand by condition with feeding interrupting.

On the other hand, Vila Masot teaches (figs 5 – 7) the operation of a circuit breaker with the sensor which is maintaining the feeding current during the first period and bringing the device in a stand by condition with feeding interrupting.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Hartmann with the circuit breaker as taught by Vila Masot for the purpose protecting the circuit when the sensor detect the overload current.

As to claim 26, Vila Masot teaches (figs 5 – 7) the period of time is divided into a τ first time fraction τ_1 of stabilization of the sensor and a second time fraction τ_2 of reading and transmission of the signal.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571 – 272 – 1965. The examiner can normally be reached on M-F from 9 to 5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtiaz Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN.
April 14, 2006


VINH NGUYEN
PRIMARY EXAMINER
A.U.-2829
04/14/06